

**AUTOMATED TICKET CANCELLATION DEVICE AND
PROCESS FOR CANCELING UNIQUELY NUMBERED TICKETS**

Background of the Invention

This invention relates generally to ticket cancellation devices, and more particularly to an automated ticket cancellation device and process for canceling uniquely numbered tickets.

Many attempts have been made over the last several years to cure the problem of adequately canceling tickets. Tickets, such as lottery tickets, are frequently canceled by either scanning a ticket for a bar code applied thereon with a lottery terminal or by manually entering the serial number of the ticket into the lottery terminal. Currently, in some applications, a retailer desiring to cancel an unused ticket (e.g., a preprinted lottery ticket) must manually record the ticket's unique control number and then mechanically punch a hole in the ticket. If the ticket serial number is manually entered into the lottery terminal, there is a serious risk that an incorrect number inputted into the terminal may result in the potential of canceling an otherwise proper ticket. In addition, a person having possession of such ticket may submit the improperly canceled ticket for payment.

As recognized in U.S. Patent No. 5,682,819 to Beaty, the chance of fraud is relatively large given the ability of lottery agents to reprint tickets, then cancel the tickets after customers have purchased them. Beaty discloses a method for voiding a valid lottery ticket (e.g., a lotto-type ticket) having a serial control number marked thereon. Beaty's method includes the steps of: 1) altering the ticket to mark it void; 2) reading the voided ticket by a lottery terminal; and 3) canceling the serial control number record of the lottery ticket in response to the terminal reading the void mark. Beaty further discloses two primary ways of marking the ticket. The first is by punching a hole in the ticket by a commercially available hole punch. The second is by submitting the ticket to an auxiliary device, such as a printer, and printing indicia on the ticket (e.g., the letters

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“VOID”). While suitable for their intended purpose, hole punches and printers greatly add to the cost of the terminal, and thus, increase the overall cost of a system implementing Beaty’s method of canceling tickets.

Summary of the Invention

Among the several objects of the present invention are: the provision of an automated ticket cancellation device and process for canceling uniquely numbered tickets which eliminate errors in recording the unique control numbers; the provision of such a device and process which ensure that all canceled tickets have been marked as such; and the provision of such a device and process which reduce the time required to cancel a ticket.

In general, a lottery terminal capable of canceling a uniquely numbered lottery ticket having a control number and an area with thermally reactive coating material disposed thereon includes a microprocessor for controlling the operation of the device, imaging means for imaging the lottery ticket, memory means for storing data pertinent to the lottery ticket, and an automated lottery ticket cancellation device including means for receiving the lottery ticket therein and a thermal head for generating heat. The thermal head of the device permanently marks the lottery ticket at the area when positioned adjacent the thermal head prior to the imaging the lottery ticket.

A process for canceling a uniquely numbered ticket having a control number and an area with thermally reactive coating material disposed thereon comprises the steps of:

- (a) inserting the lottery ticket into a lottery terminal having means for receiving the lottery ticket therein;
- (b) activating the thermally reactive coating material of the lottery ticket for

permanently marking the lottery ticket;

- (c) imaging the lottery ticket for detecting the activated thermally reactive coating material and for reading the control number of the lottery ticket; and
- (d) recording the control number.

Other objects, features and advantages of the invention shall become apparent as the description thereof proceeds when considered in connection with the accompanying illustrative drawings.

Brief Description of the Drawings

In the drawings which illustrate the best mode presently contemplated for carrying out the present invention:

Fig. 1 is a perspective view illustrating a lottery ticket having a strip of thermally reactive material applied thereon;

Fig. 2 is a cross-sectional view taken along line 2--2 of Fig. 1;

Fig. 3 is a side elevational view illustrating the ticket being read by an automated ticket cancellation device of the present invention;

Fig. 4 is a perspective view similar to Fig. 1 after applying the lottery ticket in the device shown in Fig. 3 with the strip thermally activated by the device to have a darkened appearance; and

Fig. 5 is a simplified block diagram of a terminal embodying the automated ticket cancellation device.

Corresponding reference numerals designate corresponding parts throughout the several views of the drawings.

Detailed Description of the Preferred Embodiment

Referring now to the drawings, and more particularly to Figs. 1 and 2, there is generally indicated at 10 a lottery ticket having a control number 12 and a strip of reactive coating material 14 which can be manipulated to permanently mark or blemish the lottery ticket 10. The control number 12 can be a unique number particular to the specific lottery ticket 10, or in the form of a bar code, or both. The importance of the control number 12 is that it sets forth the particulars of the ticket 10, including, but not limited to, the numbers (either quick pick or chosen), the drawing, the serial number, etc.

The strip of reactive coating material 14 can be in the form of a thermally reactive coating material or a chemically reactive coating material. Such a thermally reactive coating material is a micro encapsulated black dye. Examples of chemically reactive coating materials are coatings on carbonless paper.

Lottery terminals capable of generating and processing lottery tickets 10 are well known in the art. Examples of such lottery terminals are SPECTRA™ and ISYSTM terminals, which are manufactured by GTECH Corporation of West Greenwich, Rhode Island, U.S.A.

A schematic of a lottery terminal, generally indicated at 20, is illustrated in Fig. 5. As shown, the lottery terminal 20 includes a monitor 22 for displaying graphical data, a keyboard 24 for inputting data, a microprocessor 26 for controlling the operation of the terminal 20, a receiver 28 for receiving an already issued lottery ticket 10, an imaging device 30 for detecting material and for reading the face or faces of the lottery ticket 10, memory 32 for storing data imaged on lottery tickets, and a cancellation device 34. The lottery terminal 20 can further include other components,

such as additional imagers, a printer, bar code readers, etc., all of which are not illustrated in the drawings.

As stated above, the terminal 20 is capable of branding the strip of reactive coating material 14 in the manner illustrated in Fig. 3. Specifically, the cancellation device 34 includes a device 36 which, when processing lottery tickets 10 having a strip of thermally reactive coating material 14, applies heat to the strip 14. In such a case the device 36 can embody a thermal print head, for example. Conversely, when processing lottery tickets 10 having chemically reactive coating material, the device 36 applies a chemical to the strip 14. It is contemplated that the device 36 of the described lottery terminal 20 is capable of only applying heat, or a chemical, but not both. However, certainly such a device 36 is feasible to persons having skill in the art.

The process by which a lottery ticket 10 is cancelled by the lottery terminal 20 is as follows:

- (1) inserting the lottery ticket 10 into the receiver 28 of the terminal 20;
- (2) activating the device 36 to apply heat or chemical to the strip of reactive coating material 14 on the lottery ticket 10 for permanently marking or branding the ticket 10;
- (3) imaging the lottery ticket 10 with the imaging device 30 of the terminal 20 for detecting the activated strip of thermally reactive coating material 14 and for reading the tickets' control number 12; and
- (4) recording or storing via the memory 32 the information imaged by the imaging device 30.

The process of branding before imaging the ticket can be referred to as "unconditional branding". Branding after imaging the lottery ticket ("conditional branding") is known in the art. Reference can be made to U.S. Patent No 5,109,153 to Johnsen et al. as an example of a system

incorporating conditional branding, i.e., where the lottery terminal brands only if it recognizes the ticket as an "official" lottery ticket. The significance of unconditionally branding the ticket is that unconditional branding shortens the time required to process a transaction since the device does not have to wait to determine if the ticket is an "official" lottery ticket before initiating the branding process.

While there is shown and described herein certain specific structure embodying the invention, it will be manifest to those skilled in the art that various modifications and rearrangements of the parts may be made without departing from the spirit and scope of the underlying inventive concept and that the same is not limited to the particular forms herein shown and described except insofar as indicated by the scope of the appended claims.